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Port of Portland
Marine Department

DRAFT MEMORANDUM

Date:	July 26, 2000
To:	Sebastian Degens
Copies:	Marcel Hermans Mike Eaton Jim Bloom Trey Harbert Pamela Brody-Heine
From:	John Childs Pad Quinn
Re:	MT-6 Management of Maintenance Dredging Material

Purpose

The purpose of this memorandum is to present the decision points to manage the dredged material generated during at T-6 maintenance dredging. The following three decisions will need to completed:

- Determine the location for rehandling the dredged material;
- Determine the location for discharging the effluent water; and
- Determine the final disposition of the dredged material

This memorandum does not describe the process to obtain a dredging permit, but instead, the decision process after the dredging permit has been obtained and the process to determine the management of the dredged material.

Determination of Rehandle Location

Potentially, three rehandle facilities will be available to manage the dredged material:

1. Suttle Road non-contaminated sand rehandle facility;
2. Suttle Road non-contaminated sand/silt rehandle facility; and
3. Berth 408 contaminated/non-contaminated rehandle facility.

what constitutes silt materia vs sand (%)

Because maintenance dredging typically contains some silts, the non-contaminated sand rehandle facility is not a likely option. Therefore the Suttle Road sand/silt facility and the Berth 408 facility are the two options that will be further evaluated.

Suttle Road Facility

Dredged material will be pumped into an approximate 7-acre facility at the Suttle Road site. The facility will be constructed as a sand cell with watertight, plastic-lined, sand sides. As dredged material is placed in the cell, water will infiltrate through the bottom of the cell and surface water will be discharged into the Columbia River.

For dredged material to be managed at the Suttle Road Facility, water infiltrating to the ground will need to meet the groundwater reference levels and water discharging into the Columbia River will need to meet the Water Quality Criteria. In addition, the dredged material cannot be hazardous waste. The requirements, regulatory levels, and analytical test methods are listed in Table 1.

Table 1. Requirements to Manage Dredged Material at the Suttle Road Facility

Media	**Requirement**	**Regulatory Level**	**Analytical Test**	**Additional Analysis**
Sediment	Non-Haz Waste	RCRA	TCLP	
Groundwater	Acceptable for human consumption of GW	DEQ Reference Levels/MCL	SPLP	Determine if a receptor of GW is present
Surfacewater	Acceptable to water ecology	WQC	Elutriate	Model partitioning coefficient and mixing zone

Berth 408

Dredged material will be pumped into an approximate 4-acre facility at the Marine Terminal 4, Berth 408. The facility will be constructed on an asphalt-paved dock with concrete barriers. The facility will consist of one large cell (approximately ___ acres) and one to two small cells. The one large cell will be use as the primary settling pond, while the remaining cells will be used for secondary and possible tertiary dewatering. Discharge of water will be done from the secondary or tertiary cells.

The effluent water will be discharged to one of three points:

- Willamette River
- City of Portland Sanitary Sewer
- Holding tanks for treatment with final discharge to the Willamette River

Because dredged material at the Berth 408 facility will be contained, groundwater is not a potential pathway and the sediment will only need to be screened for hazardous waste. However the discharge water will need to be characterized to meet the requirements of the receiving water. The requirements, regulatory levels, and analytical test methods are listed in Table 2.

Table 2. Requirements to Manage Dredged Material at the Suttle Road Facility

Media	Requirement	Regulatory Level	Analytical Test	Additional Analysis
Sediment	Non-Haz Waste	RCRA	TCLP	
Groundwater	No receptor	Not applicable	Not applicab	
Surfacewater to River	Acceptable to water ecology	WQC	Elutriate	Model partitioning coefficien and mixing zone
Surfacewater to Sanitary	Acceptable to city Sanitary	City of Portland	Elutriate	May require monitoring
Treat SW and discharge to rive	Acceptable to water ecology	WQC	To be determined	Identify treatment standard to meet WQC

Final Disposition Location

Final disposition of the dredged material will be determined after the dewatering has occurred using a soil sampling plan. Three potential locations will be available:

- Use offsite as benificial use (e.g. quarry fill)
- Place on Port property (note: mixing with additive to make suitable for structural fill may be required)
- Place in landfill as Daily Cover

Closing

Size/design of facility
Vol. of material

- Hydraulic modelling on rehandle facility w/ the elutriate test.

- mixing zone argument can be made through modelling, if necessary, or could be a dilution factor argument.